

REMARKS

This is in full and timely response to the Office Action mailed on December 5, 2005. Reexamination in light of the amendments and the following remarks is respectfully requested.

Claims 1, 8-10 and 15-32 are currently pending in this application, with claims 1 and 18 being independent.

No new matter has been added.

Claim rejections

Paragraph 1 of the Office Action indicates a rejection of claims 1, 8-10, and 15-27 under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 4,661,053 to Yokota et al. (Yokota) in view of U.S. Patent No. 3,774,890 to Lemelson and in further view of U.S. Patent No. 6,769,892 to Hehl

Paragraph 2 of the Office Action indicates a rejection of claims 9 and 26 under 35 U.S.C. §103 as allegedly being unpatentable over Yokota in view of Lemelson in further view of Hehl, and in further view of U.S. Patent Application No. 2002/0045126 to Watanabe et al. (Watanabe).

These rejections are traversed at least for the following reasons.

Claim 1 - Claim 1 is drawn to an apparatus for manufacturing an anisotropic formed body in which functional, magnetic fine particles are oriented in a specific direction within a matrix and in which anisotropy is given to properties attributable to the functional fine particles, comprising:

a superconducting magnet device that has a cylindrical superconducting coil and generates a uniform and parallel magnetic field in which magnetic lines of force at

equal intervals and parallel to each other extend through a mold arranged in a barrel axis of the superconducting coil;

a heating device adapted to heat in the mold a liquid molding material with the functional fine particles contained in the matrix, said heating device being disposed within said transfer opening; and

a drive device adapted to drive at least one of the mold and the heating device in the barrel axis direction of the superconducting coil,

wherein the cylindrical superconducting coil is composed of an upper superconducting coil and a lower superconducting coil vertically spaced apart from each other, and

wherein a gap between the upper and lower coils constitutes a transfer opening for the mold,

Claim 18 - Claim 18 is drawn to an apparatus for manufacturing an anisotropic formed body, the apparatus comprising:

a cylindrical superconducting coil having a first superconducting coil and a second superconducting coil; and

a heating device adapted to heat a mold, said heating device being disposed within a transfer opening, wherein:

said first and second superconducting coils are structurally adapted to generate a magnetic field,

said transfer opening separates said first second superconducting coil from said second superconducting coil, and

said mold, when disposed within said transfer opening, has said magnetic field extending therethrough.

The following description is provided for illustrative purposes and is not intended to limit the scope of the invention.

As described within the specification as originally filed, the mold (11) is heated for a predetermined period of time while being sandwiched between the upper heating device (9a) and the lower heating device (9b), and the liquid molding material is further softened. In the meantime, functional fine particles are easily orientated in a uniform and parallel magnetic field (16). Thereafter, heating is performed at a still higher temperature to crosslink the liquid molding material, thereby fixing the orientation of the functional fine particles in the anisotropic conductive portion. Support may be found within the specification as originally filed, at least in paragraph [0032].

The Office Action relies upon Yokota, Lemelson, Hehl, and Watanabe in the rejection of the claims. Page 3 of the Office Action refers to the Hara reference. U.S. Patent No. 3,555,621 has been previously made of record.

Yokota - Yokota arguably teaches a plastic magnet injection molding machine having a moveable platen side exciting coil 10, a stationary platen side exciting coil 24, a movable mold 32, and a stationary mold 34 (Yokota at Figure 3).

However, Yokota fails to disclose, teach or suggest a heating device disposed within the transfer opening.

Thus, Yokota fails to disclose, teach or suggest *a heating device adapted to heat in the mold a liquid molding material with the functional fine particles contained in the matrix, said heating device being disposed within said transfer opening*, as found at least within claim 1.

Moreover, Yokota fails to disclose, teach or suggest *a heating device adapted to heat a mold, said heating device being disposed within a transfer opening*, as found at least within claim 18.

Lemelson - Lemelson arguably teaches an apparatus having an electrical induction coil 24 and a second coil 24 (Lemelson at figure 1, column 3, lines 61 and 67). The Office Action intends coils 24 and 25 of Lemelson to be the superconducting coil found within the

claims of the client's application (Office Action at page 3). The Office Action contends that Lemelson teaches the presence of a mold die 16 (Office Action at page 3).

The Office Action contends that Lemelson teaches the use of an electrical induction coil 24 surrounding the chamber 12 and controllably operable to heat the material within the chamber, and further contends that this heating element would follow before the operation of the electromagnet's coil 25 onto the material processed within the apparatus (Office Action at page 4).

However, Lemelson fails to disclose, teach or suggest the electrical induction coil 24 being disposed within the extrusion chamber 12 (Lemelson at Figure 1).

Thus, Lemelson fails to disclose, teach or suggest *a heating device adapted to heat in the mold a liquid molding material with the functional fine particles contained in the matrix, said heating device being disposed within said transfer opening*, as found at least within claim 1.

Moreover, Lemelson fails to disclose, teach or suggest *a heating device adapted to heat a mold, said heating device being disposed within a transfer opening*, as found at least within claim 18.

Hehl - Hehl arguably teaches an injection molding machine for processing plastics having cooling ducts 27, which lie behind or adjacent the stator windings 26 when viewed from the magnets 25, are associated with said stator windings in the cylindrical walls of the stator, so that the heating, caused by the current, can be reliably dissipated (Hehl at Figure 3).

However, Hehl fails to disclose, teach or suggest a heating device disposed within the transfer opening.

Thus, Hehl fails to disclose, teach or suggest *a heating device adapted to heat in the mold a liquid molding material with the functional fine particles contained in the matrix, said heating device being disposed within said transfer opening*, as found at least within claim 1.

Moreover, Hehl fails to disclose, teach or suggest *a heating device adapted to heat a mold, said heating device being disposed within a transfer opening*, as found at least within claim 18.

Watanabe - Watanabe arguably teaches photo-curable resin compositions and a process for preparing a resin-based mold.

However, Watanabe fails to disclose, teach or suggest a heating device disposed within the transfer opening.

Thus, Watanabe fails to disclose, teach or suggest *a heating device adapted to heat in the mold a liquid molding material with the functional fine particles contained in the matrix, said heating device being disposed within said transfer opening*, as found at least within claim 1.

Moreover, Watanabe fails to disclose, teach or suggest *a heating device adapted to heat a mold, said heating device being disposed within a transfer opening*, as found at least within claim 18.

Hara - Hara arguably teaches the presence of annular exciting coils 11, 12 (Hara at Figures 1-3). Hara arguably teaches the presence of annular exciting coils 51, 58 (Hara at Figures 4-5). Hara arguably teaches the presence of annular exciting coils 71, 80 (Hara at Figure 9). Hara arguably teaches the presence of annular exciting coils 101, 111 (Hara at Figure 10).

However, Hara fails to disclose, teach or suggest a heating device disposed within the transfer opening.

Thus, Hara fails to disclose, teach or suggest *a heating device adapted to heat in the mold a liquid molding material with the functional fine particles contained in the matrix, said heating device being disposed within said transfer opening*, as found at least within claim 1.

Moreover, Hara fails to disclose, teach or suggest *a heating device adapted to heat a mold, said heating device being disposed within a transfer opening*, as found at least within claim 18.

Withdrawal of this rejection and allowance of the claims is respectfully requested.

Conclusion

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of the amendments and remarks is courteously solicited.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone Brian K. Dutton, Reg. No. 47,255, at 202-955-8753.

If any fee is required or any overpayment made, the Commissioner is hereby authorized to charge the fee or credit the overpayment to Deposit Account # 18-0013.

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Respectfully submitted,

By 

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